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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference <b>GR 98P2946P</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/DE99/03191</b>	International filing date (day/month/year) <b>04 October 1999 (04.10.99)</b>	Priority date (day/month/year) <b>23 October 1998 (23.10.98)</b>
International Patent Classification (IPC) or national classification and IPC <b>H04N 7/30</b>		
Applicant <b>SIEMENS AKTIENGESELLSCHAFT</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand <b>28 March 2000 (28.03.00)</b>	Date of completion of this report <b>21 July 2000 (21.07.2000)</b>
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/DE99/03191

**I. Basis of the report**

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

 the international application as originally filed. the description, pages 1-26, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the claims, Nos. 6-14, 21-28, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. 1-5, 15-20, filed with the letter of 25 May 2000 (25.05.2000),  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand,  
sheets/fig 1/9-9/9, filed with the letter of 19 January 2000 (19.01.2000),  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. The amendments have resulted in the cancellation of:

 the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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International application No.  
PCT/DE 99/03191

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-28	YES
	Claims		NO
Inventive step (IS)	Claims	1-28	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-28	YES
	Claims		NO

## 2. Citations and explanations

The report makes reference to the following search report citations:

D1: SOUCY M ET AL: 'A TEXTURE-MAPPING APPROACH FOR THE COMPRESSION OF COLORED 3D TRIANGULATIONS' THE VISUAL COMPUTER, DE, BERLIN, Vol. 12, No. 10, 1 January 1996 (1996-01-01), pages 503-514, XP000196929

D2: WO-A-97/42766 (MARTI EVA; PARDAS MONTSE (ES); AYUSO FRANCISCO XAVIER (ES); SALEMB) 13 November 1997 (1997-11-13)

D3: US-A-5 057 940 (FUKUHARA TAKAHIRO ET AL) 15 October 1991 (1991-10-15)

D4: KAUFF P ET AL: 'SHAPE-ADAPTIVE DCT WITH BLOCK-BASED DC SEPARATION AND DELTA DC CORRECTION' IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, US, IEEE INC. NEW YORK, Vol. 8, No. 3, 1 June 1998 (1998-06-01), pages 237-242, XP000767693 ISSN: 1051-8215

D5: TEKALP A M ALTUNBASAK Y ET AL: 'TWO- VERSUS THREE DIMENSIONAL OBJECT BASED VIDEO COMPRESSION' IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, US, IEEE INC. NEW YORK, Vol. 7, No. 2, 1 April 1997 (1997-04-01), pages 391-397, XP000687655

ISSN: 1051-8215.

The present invention relates to a method (Claim 1) and a device (Claim 20) for processing a digital image with image points containing coding information.

Prior art:

As per document D1, a texture mapping is used to compress 3D colour images. To this end, a high-resolution model is formed from triangular meshes and transformed into a compressed model. The document indicates a method for transforming the texture mapping quickly and efficiently.

Document D2 describes a method and a system for coding an image sequence using triangular meshes and a tree structure. It subdivides the actual mapping into a network of blocks with nodal points located on points of high gradient. The blocks are then subdivided into two triangles.

Document D3 shows an image transmission system in which the image objects are transmitted separately from the background. The image objects are coded with a 3D method and recombined with the background in the receiver.

Document D4 shows the object-based DCT coding method used in MPEG-4.

Document D5 compares two- and three dimensional object-based methods for compressing image data.

None of the search report citations from the prior art shows a method or a device for processing a digital image

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

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as per Claims 1 and 20 respectively.

Furthermore, the claimed invention is considered industrially applicable, since the claimed method and device can be used for coding image data.

The requirements of PCT Article 33 are therefore met.

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

The description does not cite the relevant prior art disclosed in D1-D3 (PCT Rule 5.1(a)(ii)).

The features of the claims have not been provided with reference signs placed between parentheses (PCT Rule 6.2(b)).

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference GR 98P8075P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE99/02417	International filing date (day/month/year) 04 August 1999 (04.08.99)	Priority date (day/month/year) 12 August 1998 (12.08.98)
International Patent Classification (IPC) or national classification and IPC H04M 11/06		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 10 March 2000 (10.03.00)	Date of completion of this report 20 June 2000 (20.06.2000)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/DE99/02417

**I. Basis of the report**

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

 the international application as originally filed. the description, pages 1-11, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_. the claims, Nos. 1-5, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_. the drawings, sheets/fig 1/3-3/3, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

 the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/DE 99/02417

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-5	YES
	Claims		NO
Inventive step (IS)	Claims	1-5	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

**2. Citations and explanations**

1. This report cites the following reference documents:

D1: US-A-5 142 538 (STEWART BERNARD E. ET AL.),  
25 August 1992 (1992-08-25)  
D2: WO-A-97/41700 (MEISNER CHRISTOPHER; BORGREEN  
THOMAS (DK); MAXON SYSTEMS INC. LOND),  
6 November 1997. (1997-11-06).

2. Since the claimed subject matter cannot be explicitly found in any of the citations, the invention should be considered novel (PCT Article 33(2)).

Moreover, the invention is industrially applicable, since it can be used industrially (PCT Article 33(4)).

3. Claim 1 concerns a method for controlling data transmission in a cordless V.24 data transmission system operated for data telecommunication between a data terminal and a data transmission device.

The V.24 interface supports modem operation with a PC. When the interface comprises 9 links, a

"hardware handshake" is performed. However, if the interface comprises only 7 links, a "software handshake" is performed.

The invention addresses the problem of controlling transmission of the states "RTS", "CTS" in a cordless V.24 data transmission system operated for data telecommunication between a data terminal and a data transmission device in such a way that reliable mutual communication of the state in the cordless V.24 data transmission system is ensured in a simple way in the case of both state transmission types.

This very specific problem cannot be found in any of the known documents. The prior art therefore neither discloses nor suggests the claimed solution, which is also very specific (see features a-e of Claim 1). Consequently, a person skilled in the art would not have arrived at the claimed subject matter without being inventive. Independent Claim 1 therefore meets the requirement of PCT Article 33(3).

Claim 1 therefore meets all the requirements of PCT Article 33(1).

3. Dependent Claims 2-5 concern advantageous embodiments of the independent claim and therefore also meet the requirements of PCT Article 33(1).

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

D1 (see the abstract and Figure 1) describes a method for controlling data transmission in a cordless V.24 data transmission system operated for data telecommunication between a data terminal and a data transmission device.

Consequently, the two-part form defined by PCT Rule 6.3(b) appears to be appropriate for Claim 1 in the present case.

Moreover, the description should cite D1 (PCT Rule 5.1(a)(ii)).